

REPORT ON ELECTRIC LIGHTING INSTALLATION.

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No. 31811

Port of *Aull* Date of First Survey *4/3/20* Date of Last Survey *21/4/20* No. of Visits *5*
 No. in Reg. Book on the *Iron* or Steel *S.T. ASAMA* Part belonging to *Cardiff*
 Built at *Beverley* By whom *Cook Welton & Lunnell* When built *1920*
 Owners *Neale & West Ltd* Owners' Address *Cardiff*
 Yard No. *371* Electric Light Installation fitted by *Amber Electrical Eng. Co* When fitted *1920*

DESCRIPTION OF DYNAMO, ENGINE, ETC.

Siemens Muelson engine direct coupled to 4 pole compound wound dynamo running at 600 Revs per minute
 Capacity of Dynamo *55 Amps* Amperes at *65* Volts, whether continuous or alternating current *Continuous*
 Where is Dynamo fixed *Star side of engine room* Whether single or double wire system is used *Double*
 Position of Main Switch Board *" " " "* having switches to groups *A.B.C.D* of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each *one 10 way Whulhouse 12 switches, one 5 way Aft Accommodation 3 switches, one 3 way Forecastle 3 switches*
 If fuses are fitted on main switch board to the cables of main circuit *Yes* and on each auxiliary switch board to the cables of auxiliary circuits *Yes* and at each position where a cable is branched or reduced in size *Yes* and to each lamp circuit *Yes*
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits *Yes*
 Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *25%* per cent over the normal current
 Are all fuses fitted in easily accessible positions *Yes* Are the fuses of standard dimensions *Yes* If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit *Yes*
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes*
 Total number of lights provided for arranged in the following groups:—

Group	Description	Number of Lights	Watts each	Total Watts	Amperes
A	lights each of	16	16	256	3.6
B	lights each of	16	16	256	3.2
C	lights each of	16	16	256	3.3
D	lights each of	16	16	256	2.1
E	lights each of	32	32	1024	5.8
F	lights each of	32	32	1024	3.9
G	lights each of	6 @ 16	16	96	Incandescent

 If are lights, what protection is provided against fire, sparks, &c. *✓*

Where are the switches controlling the masthead and side lights placed *In whulhouse*

DESCRIPTION OF CABLES.

Description	Amperes	Comprised of	Wires	Each	S.W.G. diameter	Square inches total sectional area
Main cable carrying	55	19	18	18	.034	square inches total sectional area
Branch cables carrying	21	7	18	18	.0125	square inches total sectional area
Branch cables carrying	9	3	20	20	.0030	square inches total sectional area
Leads to lamps carrying	2	1	18	18	.0018	square inches total sectional area
Cargo light cables carrying						square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Lead covered in both 9 whulhouse elsewhere lead covered & galvanized wire armoured
 Joints in cables, how made, insulated, and protected *No joints, porcelain connections in iron boxes*
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *✓* Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage *✓*
 Are there any joints in or branches from the cable leading from dynamo to main switch board *No*
 Are the cables led through the ship, and how protected *Lead covered & armoured, clipped to casing decks*

DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Lead covered & armoured*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *Lead covered & armoured*

What special protection has been provided for the cables near boiler casings *Lead covered & armoured*

What special protection has been provided for the cables in engine room *Lead covered & armoured*

How are cables carried through beams *Bushes* through bulkheads, &c. *Lead bushed & glazed*

How are cables carried through decks *deck pipes*

Are any cables run through coal bunkers *Yes* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage ☒

If so, how are they protected *Lead covered & armoured.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *Yes*

If so, how are the lamp fittings and cable terminals specially protected *Heavy C.I. fittings with guards*

Where are the main switches and fuses for these lights fitted *in hullhouse*

If in the spaces, how are they specially protected ☒

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *portable* How fixed *Two joint plates*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *double wires*

How are the returns from the lamps connected to the hull ☒

Are all the joints with the hull in accessible positions ☒

Is the installation supplied with a voltmeter *Yes*, and with an amperemeter *No*, fixed *In switch board*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas ☒

Are any switches, fuses, or joints of cables fitted in the pump room or companion ☒

How are the lamps specially protected in places liable to the accumulation of vapour or gas ☒

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than _____ megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

W. P. Shuttleworth
PROPRIETOR

Electrical Engineers

Date _____

COMPASSES.

Distance between dynamo or electric motors and standard compass _____

Distance between dynamo or electric motors and steering compass _____

The nearest cables to the compasses are as follows:—

A cable carrying	<i>.5</i>	Ampères	<i>to</i>	feet from standard compass	feet from steering compass
A cable carrying	<i>.5</i>	Ampères	<i>to</i>	feet from standard compass	feet from steering compass
A cable carrying		Ampères		feet from standard compass	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

The maximum deviation due to electric currents; etc., was found to be *Nil* degrees on *all* course in the case of the standard compass and *nil* degrees on *all* course in the case of the steering compass.

COOK, WELTON & GEMMELL, LTD.

W. P. Shuttleworth

Builder's Signature.

Date

May 5/20

GENERAL REMARKS.

DIRECTOR,

The materials & workmanship are good on completion. The installation was examined under full working conditions & found satisfactory.

It is submitted that this vessel is eligible for

THE RECORD. ELEC. LIGHT.

W. P. Shuttleworth
10/5/20

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. MAY. 11 1920



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